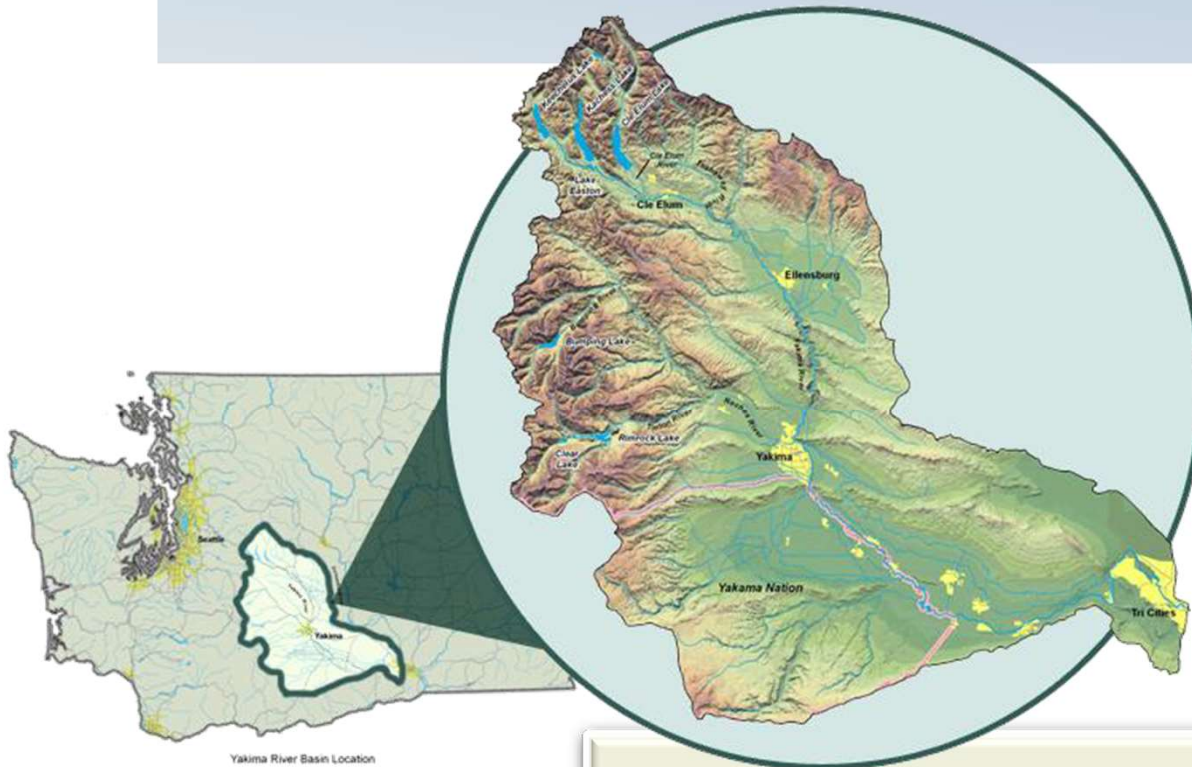


# Basin Overview



- **Basin size: 6,155 sq. miles**
- **Population: 360,000**
- **\$3.2 billion agriculture economy**
- **Historically, second only to Snake River in supporting salmon and steelhead runs**

# Yakima Basin Water Management

- **Managed by  
Bureau of Reclamation**
- **Five reservoirs with 1 million  
acre-feet of capacity**  
(average annual runoff 3.3 million acre-feet)
- **Irrigation deliveries:  
1.7 million acre-feet**
- **Snowpack is the  
“sixth reservoir”**



# Yakima River Basin Water Rights



Roza is 100% Prorable Water





# Roza Irrigation District Drought 2015



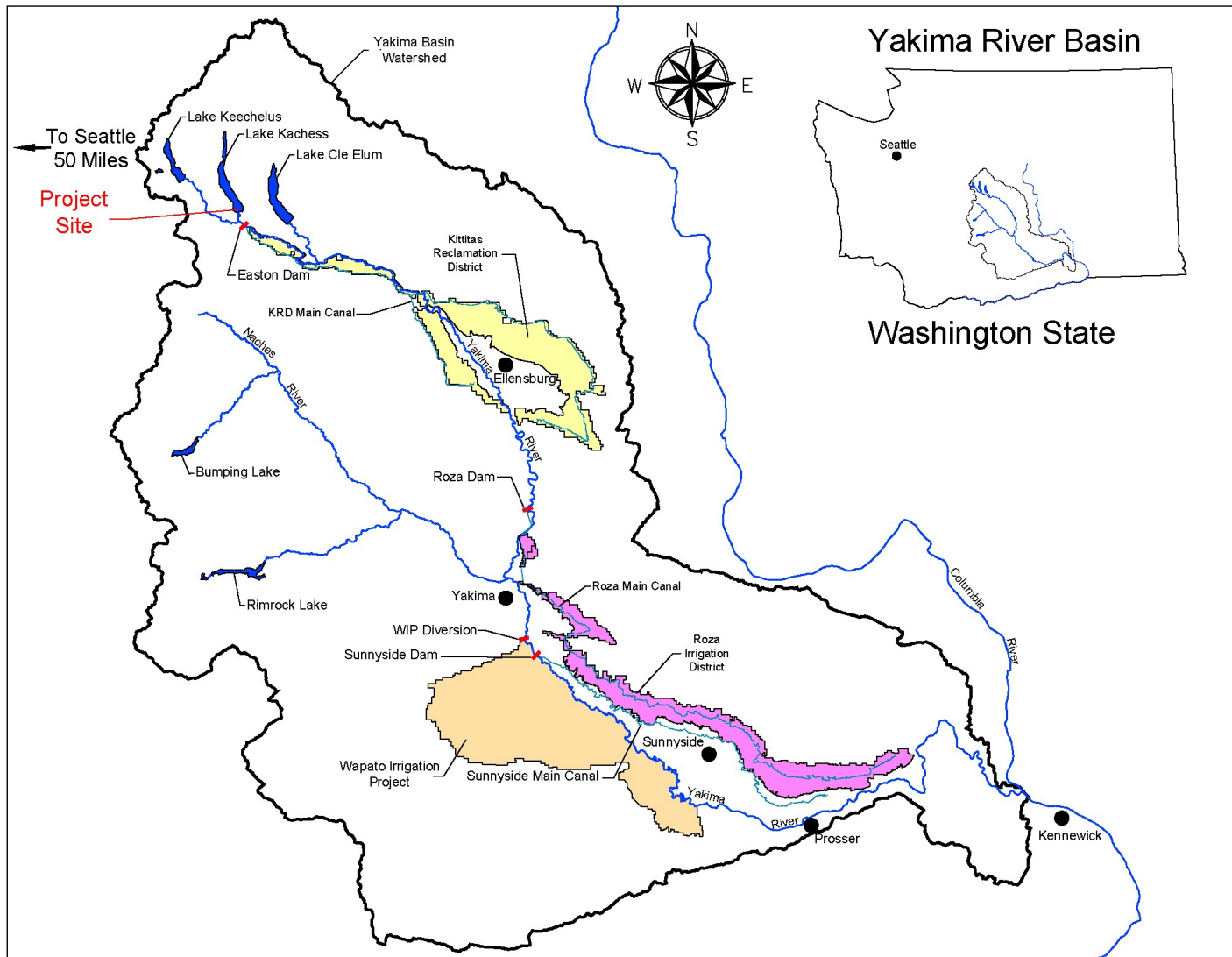
Unwatered Apple Trees Removed







# Roza Irrigation District Location









# Roza Irrigation District Overview

- 72,000 irrigated acres over 95 miles w/ 450 miles of canals.
- 80% high value perennial crops (tree fruit, hops, wine and juice grapes) with very high efficiency on-farm irrigation.
- 20% annual crops (silage corn, pasture, row crops) which support a large dairy industry.
- Total crop value of \$1 billion +/- on mostly 2<sup>nd</sup> and 3<sup>rd</sup> generation family farms.
- **47% water supply in 2015....\$77M in crop losses**
- Supply ranged from **35%** to **68%** in five prior drought years since 1992...
- .



# Roza Irrigation District Farmland



Mt. Rainier in the distance



# Roza Irrigation District Farmland



Mt. Adams in the distance





# Roza Irrigation District Farmland



Cherries and Nectarines

























# Roza Drought Response Measures

Water Supply	Delivery Restrictions*	Shut Down(s)	Roza Pump backs	Leases	End season before Sept. 30	Notes Oct 20 +/- is typ. in full yrs.
80%	Yes	No	No	No	No	Restrictions on some days
75%	Yes	No	Yes	No	Possibly	Season ends early
70%	Yes	No	Yes	Possibly	Possibly	Season ends early Leases optional-varies
65%	Yes	No	Yes	Possibly	Yes-varies	Leases optional-varies
60%	Yes	Possibly	Yes	Possibly	Yes-varies	Leases optional-varies
55%	Yes	Probably	Yes	Yes	Yes-varies	6,500 AF from leases & PB
50%	Yes	Yes (15+ days)	Yes	Yes	Yes-varies	6,500 AF from leases & PB
45%*	Yes	Yes (possibly 2)	Yes	Yes	Yes-varies*	6,500 AF from leases & PB
40%*	Yes	Yes (possibly 2)	Yes	Yes	Yes-Aug. 30*	6,500 AF from leases & PB
35%*	Yes	Yes -2	Yes	Yes	Yes-Aug. 18*	6,500 AF from leases & PB
30%*	Yes	Yes -2	Yes	Yes	Yes-Aug. 8*	18 day shutdowns



# Roza Main Canal pumpbacks to recover canal seepage





## Peach trees (Removed 2015)





















# Takeaways



- Confront the brutal facts early
- Plan like crazy before the crisis hits but be flexible
- Relationships matter most when the chips are down!
- Continuity is priceless
- Communicate, communicate, communicate!  
(water users, media, internally, USBR/State)
- 2019 Could be worse...



